(b) The main reasons for shortfall of hydro share are emphasis on Thermal/ Gas based projects due to longer gestation of hydro projects, problems due to large scale resettlement and rehabilitation of people, geological and hydrological risks associated with the construction of hydel projects, problems involving evacuation of bulk power supply since these are located in the remote areas, dearth of good contractors, Inter-State issues affecting some hydel projects and lack of adequate financial resources to implement projects.

(c) Government has taken several measures for accelerating the growth of hydro power development. These include higher budgetary support to Central Public Sector Undertakings like National Hydroelectric Power Corporation Ltd. (NHPC), North Eastern Electric Power Corporation (NEEPCO) and Tehri Hydro Development Corporation (THDC), advance action for new hydel projects, liberalised policy to attract private sector participation and action plan for hydro power development in North Eastern Region.

Government of India has announced a Policy on Hydro Power Development in August 1998 in order to accelerate the pace of hydro power development. The policy envisages the following measures for this purpose:—

(i) Providing adequate funds in the Central/State Government budget and organising supplementary funding through Power Finance Corporation.

(ii) entrusting basin wise development to Central Hydel Public Sector Corporations.

(iii) Funding support for Survey and Investigations.

(iv) Eastablishing of Power Development Fund.

(v) Providing a differential pricing for peaking power to facilitate greater investment in hydel projects which have the capability to supply peaking power in a cost effective manner.

(vi) Providing an institutional mechanism for dealing with geological risks.

(vii) Utilising the joint venture frame work for promoting hydel projects.

(viii) Simplification of procedures relating to transfer of clearances from State Government to Central Public Sector Undertakings and State Government to private sector.

(ix) Enhancing the ceiling limits for techno-economic clearance by CEA in respect of projects promoted on the MOU route.

(x) Transfer of work relating to the development of small hydel projects upto 25 MW capacity from Ministry of Power to Ministry of Non-conventional energy Sources and providing a suitable incentive package.

Setting up of Power Projects during 9th Five Year Plan

273. SHRI BHAGABAN MAJHI: Will the Minister of POWER be pleased to state:

(a) the number of major, medium and minor power projects proposed to be set up in the country during Ninth Five Year Plan;

(b) the break-up thereof, state-wise and capacity thereof; and

(c) the location thereof and the steps taken in that regard?

THE MINISTER OF POWER (SHRI P.R. KUMARAMANGALAM): (a) and (c) State-wise and project wise details of the power projects, along with their capacity, proposed to be set up during the Ninth Five Year Plan are Annexed. [*See* Appendix 185, Annexure No. 8]

Private participation in Power Sector

274. SHRI VEDPRAKASH P. GOYAL: Will the Minister of POWER be pleased to state:

(a) whether it is a fact that due to unsatisfactory capacity utilisation ratio in Power sector and high losses in transmission and distribution, the installed capacity is not reaching the consumers in full;

(b) if so, the factors responsible therefor and remedial steps being taken by Government to prevent these losses;

(c) whether the steps taken so far have improved the situation; and

(d) the steps being taken by Government to fill the gap between demand and supply and increase the private sector participation in this sector?

THE MINISTER OF POWER (SHRI P.R. KUMARAMANGALAM): (a) The capacity utilisation of power stations depends on various factors such as, load demand, hydro-thermal mix, technical and commerical feasibilities for transfer of power from surplus to deficit regions, availability of water for hydro stations etc. The Transmission & Distribution (T&D) losses depend largely on the pattern of loading of T&D lines, type of loads, design of lines, number of distribution stages, installation of capacitors, theft and pilferage of energy etc. These conditions vary from State to State and hence T&D losses also very from State to State.

(b) The major factors responsible for high T&D losses are weak and inadequate sub-transmission and distribution system due to inadequate investments, too many transformation stages resulting in higher transformation losses, improper load management, inadequate maintenance of equipments, low power factor, inadequate strenghening of transmission and sub-transmission system, unmetered supply to agricultural pumps, defective meters, pilferage and theft of energy etc.

Supply and distribution of electricity within a State is the function of State Government/State Electricity Board and are thus, responsible to take necessary steps for reduction of T&D losses. In order to reduce the T&D losses, Central Electricity Authority has, however, issued the following comprehensive guidelines which, *inter-alia,* include-Upgradation of operating voltages, Reduction of length of LT lines, Location of transformers near load centre, Adoption of low capacity transformers at consumers premises, Installation of shunt capacitors, improvement in construction & operation techniques and Systematic and methodological approach for planning and design of distribution system on that long term basis.

The Central Electricity Authority has also issued guidelines for conducting energy audit. These guidelines lays down the procedure for conducting energy audit studies and provide a methodology for segragating technical and commercial losses.

Necessary amendments have also been enacted to the Indian Electricity Act, 1910 to make theft of electricity a cognizable offence.

Various steps have been taken by Government of India for encouraging private sector participation in generation and transmission. Government has also introduced a scheme for loans provided by Power Finance Corporation at subsidised interest rates in order to complete missing transmission links, system improvement as well as accelerated generation schemes and R&M.

(c) The average Plant Load Factor of the thermal power stations in the country has improved from 57.1% in 1992-93 to 64.7% in 1997-98. the T&D losses has reduced from 23.28% in 1989-90 to 21.13% in 1994-95.

(d) In order to fill the gap between demand and supply as well as increase private sector participation the following measures have been taken which *inter-alia,* include capacity addition, maximisation of genration from existing facilities, demand side management, energy conservation measures, promotion of inter-state/inter-regional exchanges, reduction in T&D losses, introduction of reforms and streamlining of clearance procedures in

the power sector to encourage private sector participation, R&M of thermal and hydel power stations etc.

Clearance to Power Projects in Kerala

275. SHRI A. VIJAYA RAGHAVAN: Will the Minister of POWER be pleased to state:

(a) whether Government had given clearance to the pending power projects including Hydro-electrical in Kerala State;

(b) if so, the details thereof;

(c) whether Government have given permission for Hydro Electrical projects in the State; and

(d) if so, the details thereof?

THE MINISTER OF POWER (SHRI P.R. KUMARAMANGALAM): (a) to (d) The following two projects have been given techno-economic clearance by the Central Electricity Authority:

S. No.	Name of Project	Capacity	Date of TEC
1.	Adivappally HEP (KEB)	2 × 80 MW	22.4.96
2.	Vypeen CCGT (LNG) (M/s Siasin Energy Ltd.)	679.2 MW	25.9.98

In addition, a proposal by M/s Kannur Power Projects LTD. for Kannur CCGT (513 MW) is being processed by the Central Electricity Authority (CEA) for Techno-Economic Clearance (TEC).

Impact of Sanctions by Developed Nations in Power Sector

276. KUMARI NIRMALA DESHPANDE: Will the Minister of POWER be pleased to state:

(a) whether it is a fact that power projects have been badly hit by the adverse impact of sanctions imposed by the developed nations;

(b) if so, the details thereof as assessed during the recent review of power sector;

(c) whether the financial institutions in power sector have formulated a contingency action plan for financing forthcoming projects toward off adverse impact of the sanctions; and

(d) if so, the details of action plan finalised for the current year and Ninth Plan?

THE MINISTER OF POWER (SHRI P.R. KUMARAMANGALAM): (a) and (b) The committed external assistance for the power sector has not been affected by the sanctions imposed by the different donor countries. It is only the projects or fresh tranches of the existing projects which have been put on hold. Contingency plans have been drawn up by the Central Sector Undertakings under the Ministry of Power to deal with the situation.

(c) and (d) Negotiations for financial assistance is an ongoing exercise. Government has taken steps to ensure alternative sources of finance so that the momentum of investment in the power sector is not affected. Discussions are continuing with other lending institutions to identify and develop new projects for loan assistance in the future. The Power Finance Coropration (PFC) has mobilised Rs. 561 crores through domestic sources and Rs. 428 crores (US $ 100 million) through loan syndication during the current year.